



# SurvivalRing

*Study Yesterday... Prepare Today... Live Tomorrow*

This digital document created and presented by Richard Fleetwood. He is the founder, author, producer, and webmaster of the **SurvivalRing** (<http://www.survivalring.org>) and **Civil Defense Now!** (<http://www.survivalring.org/cd-main.htm>) websites.

SurvivalRing has as its goal the ideal of being the leading source of survival, preparedness, and self reliance information on the Internet. Linkage, assistance, and creation of digital content in areas that until now have only been hinted at or impossible to find, is being added to everyday via the SurvivalRing website and email lists.

Thousands of hours of searching, writing, and communications have been spent collecting over 2 gigabytes of digital content, as well as tens of thousands of pages of hard copy original public domain material in the areas of civil defense, survival, training, and preparedness, from all over the globe.

As much as possible is being put online at his website at  
**<http://www.survivalring.org>**

## Civil Defense Now!

*Part of The SurvivalRing website*

The content of THIS file, while created from PUBLIC DOMAIN material, produced by the U.S. (or other) Government at taxpayer expense, is presented in THIS digital format, produced from the ORIGINAL hardcopy document, for the benefit of all mankind, in hoping to help spread the idea of PREPAREDNESS for any and all threats that may come from either natural, extraterrestrial (space based), or manmade sources.

There are too many situations and incidents that can come to pass in everyday life, that when time is taken to learn and skills obtained, can mean the difference between life and death. Sept. 11, 2001 proved to the world that no matter how safe a person thinks they may be, death and injury can come from the most UN-LIKELY place, at any time. The documents presented in this series of digitized works, can help the average person with the knowledge within, to know how to save those persons closest to them in REAL disaster. Help spread this idea of sharing SURVIVAL INFORMATION.

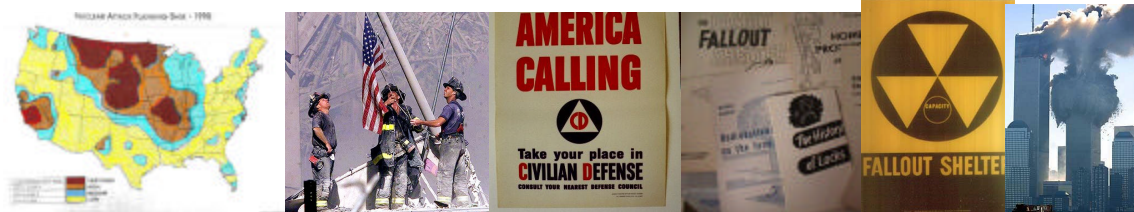
If you have documents from any era, on any disaster or civil defense area, PLEASE contact Richard at his email address of **RAFLEET@AOL.COM**. Check the website for the LATEST additions to the CIVIL DEFENSE NOW online library archive. All data online, and much more, is also available on CD-ROM. Information is available at the website on how to obtain it. Thanks for your support, and enjoy the information contained on the following pages. Share them with those who will learn from them and teach what they know to others.

*Donations of U.S. or other civil defense documents, articles, books, videos, digitized ephemera, patches, tools, photos, or anything of this nature is appreciated, as well as cash gifts or donations to support the website costs and bills. Address information is available on the homepage of Civil Defense Now! (URL located above)*

**- Richard Fleetwood - January 2002 - ALL RIGHTS RESERVED -**

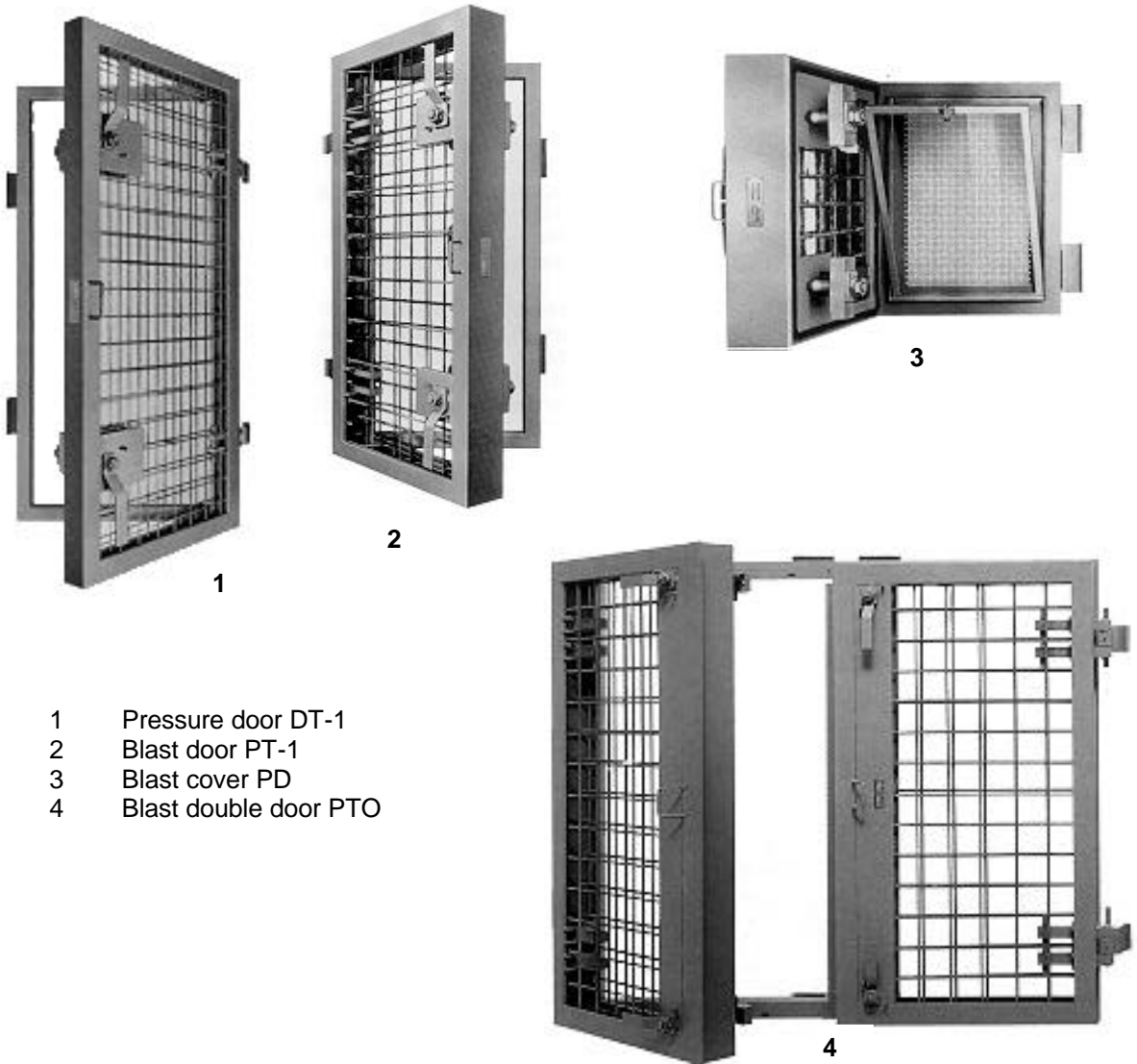
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# Shelter closures

According to the technical regulations  
of the Swiss Federal Office of Civil Defence (BZS)



- 1 Pressure door DT-1
- 2 Blast door PT-1
- 3 Blast cover PD
- 4 Blast double door PTO

## Why armoured concrete doors and covers ?

Concrete shelter walls are providing optimal protection against *Pressure, Radiation, Heat, Gases and Physical Impact*.

Lunor armoured doors provide these excellent characteristics and assure that shelter entrances are „no weak spots“.

Lunor armoured doors are set in place and poured with concrete simultaneously with the walls, thus forming a fully integral part of the shelter shell.

## Protection against weapon effects:

- Airblast from conventional or nuclear weapons
- Impact from fragments and debris
- Ground shock, i.e. vibration of shelter which is subjected to pressure wave propagating through the ground
- Heat from fires and thermal radiation from atomic weapons.
- Nuclear radiation
- Chemical and biological warfare agents

## Protection against effects from accidents in industrial plants.

- Airblast from bursting pressure vessels, vapor, dust, toxic releases, heat from fires

LUNOR doors are provided with durable rubber seals fitted into specially designed grooves. The protection against toxic gas or nuclear fallout is achieved by creating an overpressure of filtered air within the shelter.

The leakage through the PT-doors and PD-Covers by an inside overpressure of e.g. 250 N/m<sup>2</sup> is less than 20 m<sup>3</sup>/h. (PTO-doors 40m<sup>3</sup>/h)

# Armoured door

PT-1, PT-2  
PT-4

## Outside closure with 1 and 3 bar protection

### Specification:

**Supplier:** LUNOR, G.Kull AG  
CH-8041 Zurich

Design and production according to technical regulations of the Swiss Federal Office of Civil Defence  
Consisting of:  
Door leaf in steel profile frame with rubber seal on all sides and welded-in reinforcement, removable lever locks on both sides. Internal levers with locking pin against accidental opening, air blast and ground shock vibration.  
Door frame in angular profile with massive anchors and double hinges.  
Steel parts not to be covered with concrete, coated with primer.

### Armoured door, type PT-1

BZS-Nr. 74 PT-1

Frame dimensions:

Inner width: 80 cm  
Inner height: 185 cm  
Door thickness: 20 cm  
Protection level: 3 bar  
Weight without concrete: 205 kg

### Armoured door, type PT-2

BZS-Nr. 74 PT-2

Frame dimensions:

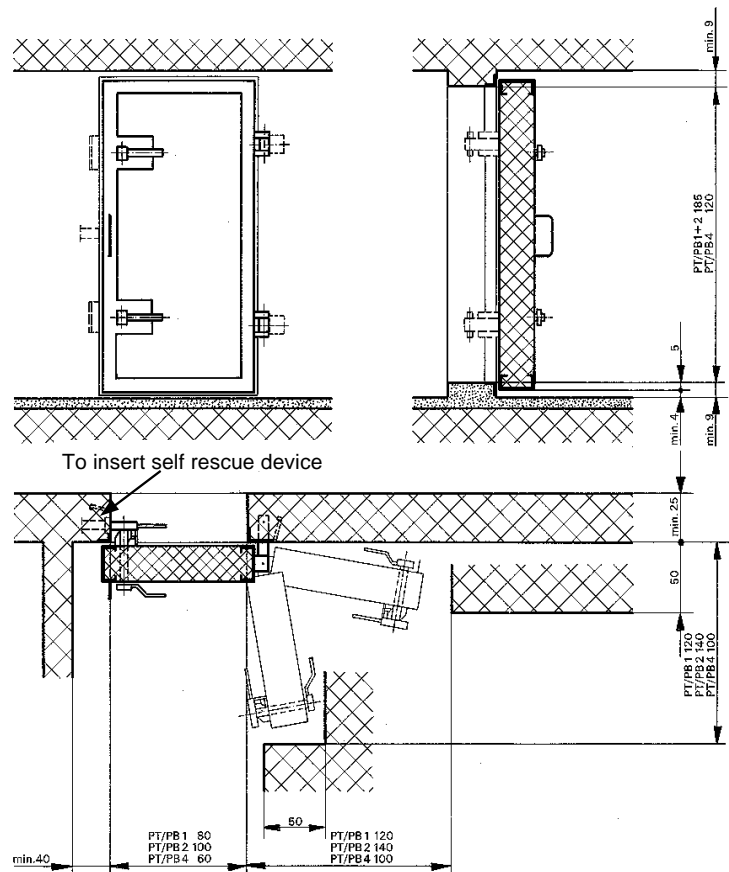
Inner width: 100 cm  
Inner height: 185 cm  
Door thickness: 20 cm  
Protection level: 3 bar  
Weight without concrete: 250 kg

### Armoured door, type PT-4

BZS-Nr. 74 PT-4

Frame dimensions:

Inner width: 60 cm  
Inner height: 120 cm  
Door thickness: 20 cm  
Protection level: 3 bar  
Weight without concrete: 170 kg



### Installation requirements:

PT and PTO-doors always open towards the outside (against air blast)

All doors should have a 4 cm free space both above the floor and under the ceiling

The doors and covers with their frames and anchors are to be placed in the forms in such a way that they are securely in place. Cast wall first. Only when the wall concrete has sufficiently set may the door leaf be filled with concrete and it is important that the door and cover leaves are closed and underpinned during the pouring of concrete. The distal pieces fixed to the locking device near the rubber seal guarantee the proper closing function.

Modifications reserved

Further details are given in the technical directives for installation, which are included with each delivery.

# Armoured door

PT-3

## Outside closure with 1 and 3 bar protection

### Specification:

**Supplier:** LUNOR, G.Kull AG  
CH-8041 Zurich

Design and production according to technical regulations of the Swiss Federal Office of Civil Defence..

Consisting of:

Door leaf in steel profile frame with rubber seal on all sides and welded-in reinforcement, removable lever locks on both sides. Internal levers with locking pin against accidental opening, air blast and ground shock vibration. Door frame in angular profile with massive anchors and double hinges. Steel parts not to be covered with concrete, coated with primer.

### Armoured door, type PT-3

BZS-Nr. 74 PT-3

With removable door sill.

Frame dimensions:

Inner width: 140 cm

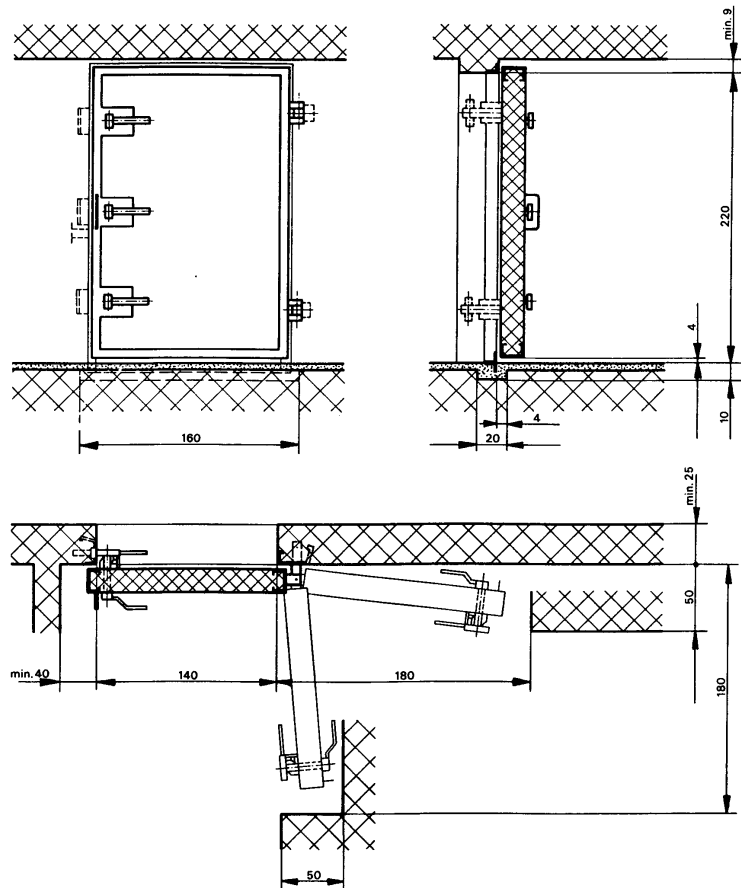
Inner height: <sup>1)</sup> 220 cm

Door thickness: 20 cm

Protection level: 3 bar

Weight without concrete: 480 kg

<sup>1)</sup> Dimension if door sill is removed



### Installation requirements:

PT and PTO-doors always open towards the outside (against air blast)

All doors should have a 4 cm free space both above the floor and under the ceiling

The doors and covers with their frames and anchors are to be placed in the forms in such a way that they are securely in place. Cast wall first. Only when the wall concrete has sufficiently set may the door leaf be filled with concrete and it is important that the door and cover leaves are closed and underpinned during the pouring of concrete. The distal pieces fixed to the locking device near the rubber seal guarantee the proper closing function.

Further details are given in the technical directives for installation, which are included with each delivery.

### Important !

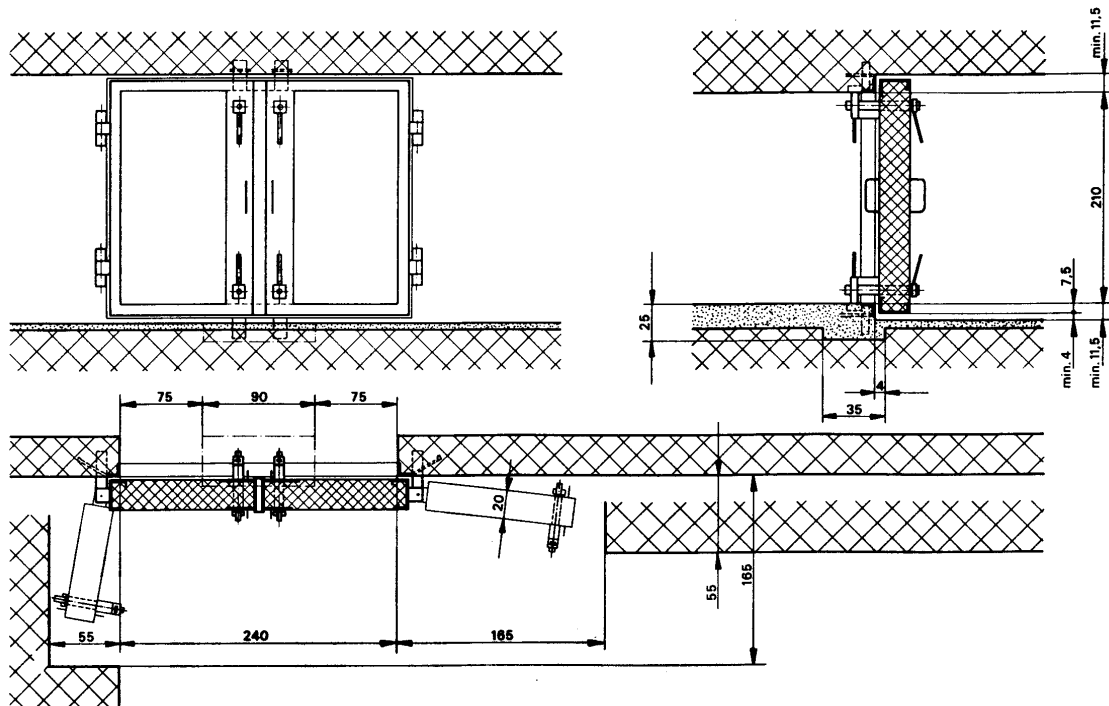
When ordering please state hinged side (left or right when viewed from outside)

Modifications reserved

# Armoured double-door

PTO

## Outside closure with 1 bar protection



### Specification:

**Supplier:** LUNOR, G.Kull AG  
CH-8003 Zurich

Design and production according to technical regulations of the Swiss Federal Office of Civil Defence..

Consisting of:

Door leaf in steel profile frame with rubber seal on all sides and welded-in reinforcement, removable lever locks on both sides. Internal levers with locking pin against accidental opening, air blast and ground shock vibration. Door frame in angular profile with massive anchors and double hinges. Steel parts not to be covered with concrete, coated with primer.

### Armoured door, type PTO BZS-Nr. 74 PTO

Frame dimensions:

Inner width:	240 cm
Inner height:	210 cm
Door thickness:	20 cm
Protection level:	1 bar
Weight without concrete:	800 kg

### Installation requirements:

PT and PTO-doors always open towards the outside (against air blast)  
All doors should have a 4 cm free space both above the floor and under the ceiling  
The doors and covers with their frames and anchors are to be placed in the forms in such a way that they are securely in place. Cast wall first. Only when the wall concrete has sufficiently set may the door leaf be filled with concrete and it is important that the door and cover leaves are closed and underpinned during the pouring of concrete. The distal pieces fixed to the locking device near the rubber seal guarantee the proper closing function.

Further details are given in the technical directives for installation, which are included with each delivery.

# Pressure door

## DT-1, DT-2

### Specification:

**Supplier:** LUNOR, G.Kull AG  
CH-8041 Zurich

Design and production according to technical regulations of the Swiss Federal Office of Civil Defence..

Consisting of:

Door leaf in steel profile frame with rubber seal on all sides and welded-in reinforcement, removable lever locks on both sides. Internal levers with locking pin against accidental opening, air blast and ground shock vibration. Door frame in angular profile with massive anchors and double hinges. Steel parts not to be covered with concrete, coated with primer.

#### Armoured door, type DT-1

BZS-Nr. 74 DT-1

Frame dimensions:

Inner width: 80 cm  
Inner height: 185 cm  
Door thickness: 10 cm

Intermediate closure (inside shelter) for shelters with 1 and 3 bar protection

Weight without concrete: 115 kg

#### Armoured door, type DT-2

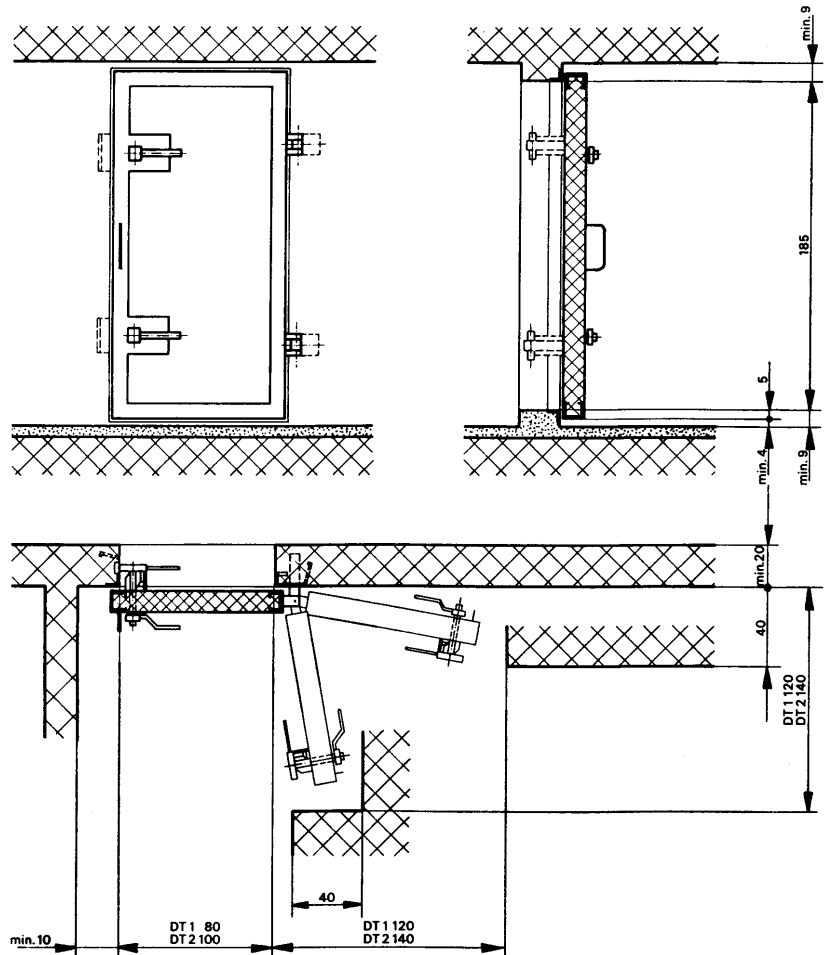
BZS-Nr. 74 DT-2

Frame dimensions:

Inner width: 100 cm  
Inner height: 185 cm  
Door thickness: 20 cm

Intermediate closure (inside shelter) for shelters with 1 and 3 bar protection

Weight without concrete: 125 kg



#### Installation requirements:

DT-doors open in either direction

All doors should have a 4 cm free space both above the floor and under the ceiling

The doors and covers with their frames and anchors are to be placed in the forms in such a way that they are securely in place. Cast wall first. Only when the wall concrete has sufficiently set may the door leaf be filled with concrete and it is important that the door and cover leaves are closed and underpinned during the pouring of concrete. The distal pieces fixed to the locking device near the rubber seal guarantee the proper closing function.

Modifications reserved

Further details are given in the technical directives for installation, which are included with each delivery.

# Pressure door

# DT-3

## Specification:

**Supplier:** LUNOR, G.Kull AG  
CH-8041 Zurich

Design and production according to technical regulations of the Swiss Federal Office of Civil Defence.

Consisting of:

Door leaf in steel profile frame with rubber seal on all sides and welded-in reinforcement, removable lever locks on both sides. Internal levers with locking pin against accidental opening, air blast and ground shock vibration. Door frame in angular profile with massive anchors and double hinges. Steel parts not to be covered with concrete, coated with primer.

### Armoured door, type DT-3

BZS-Nr. 74 DT-3

Frame dimensions:

Inner width: 140 cm

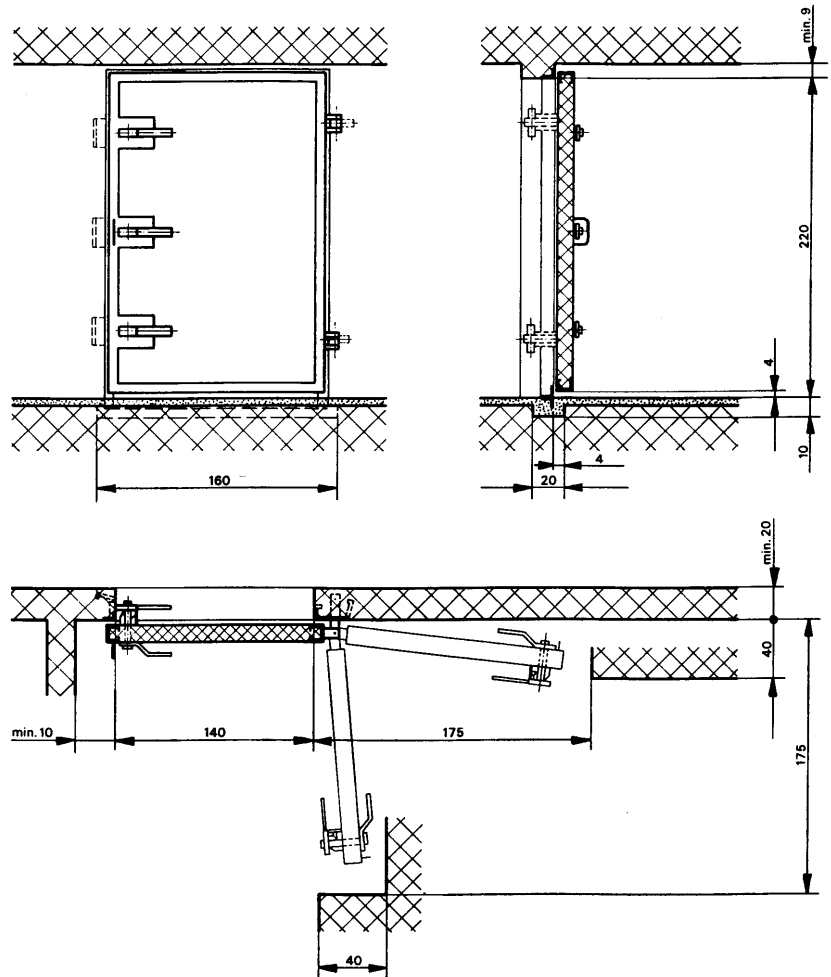
Inner height: <sup>1)</sup> 220 cm

Door thickness: 10 cm

Intermediate closure (inside shelter) for shelters with 1 and 3 bar protection, in peacetime used as warehouse etc. (passing of fork-lifts etc. possible).

Weight without concrete: 170 kg

<sup>1)</sup> Dimension if door sill is removed



## Installation requirements:

DT-doors open in either direction

All doors should have a 4 cm free space both above the floor and under the ceiling

The doors and covers with their frames and anchors are to be placed in the forms in such a way that they are securely in place. Cast wall first. Only when the wall concrete has sufficiently set may the door leaf be filled with concrete and it is important that the door and cover leaves are closed and underpinned during the pouring of concrete. The distal pieces fixed to the locking device near the rubber seal guarantee the proper closing function.

Further details are given in the technical directives for installation, which are included with each delivery.

## Important !

When ordering please state hinged side (left or right when viewed from outside)

Modifications reserved

# Armoured cover

PD

## Inside closure with 1 and 3 bar protection

### Specification:

**Supplier:** LUNOR, G.Kull AG  
CH-8041 Zurich

Design and production according to technical regulations of the Swiss Federal Office of Civil Defence.

Consisting of:

Door leaf in steel profile frame with rubber seal on all sides and welded-in reinforcement, removable lever locks on both sides. Internal levers with locking pin against accidental opening, air blast and ground shock vibration. Door frame in angular profile with massive anchors and double hinges. Steel parts not to be covered with concrete, coated with primer.

### Armoured door, type PD

BZS-Nr. 74 PD

Frame dimensions:

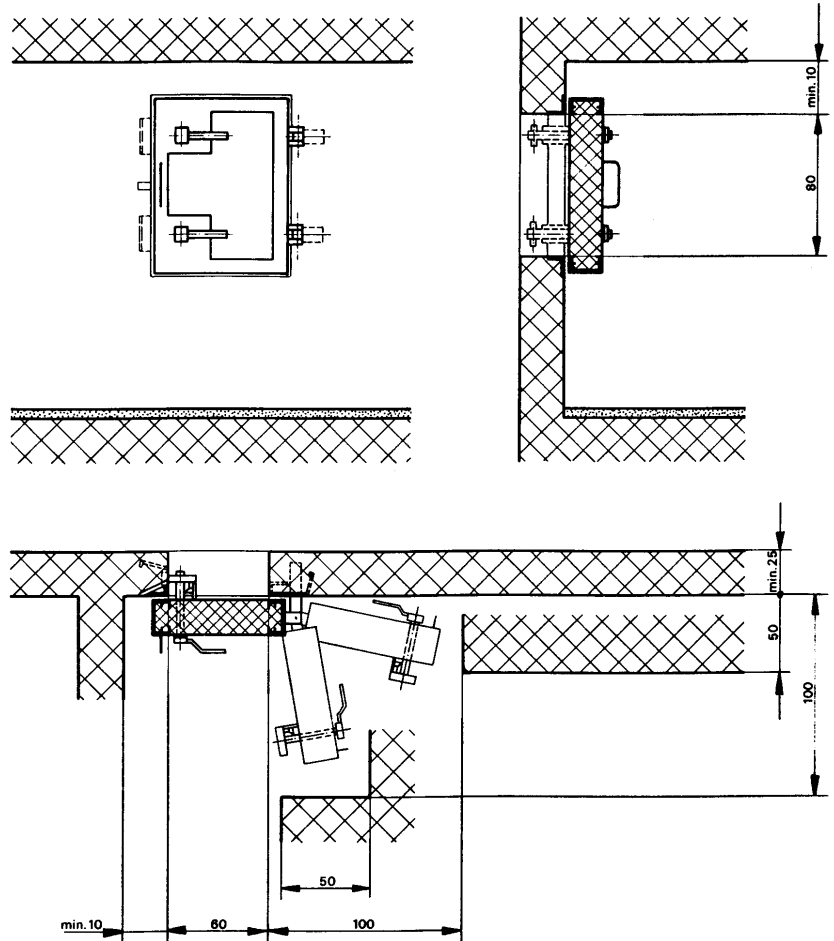
Inner width: 60 cm

Inner height: 80 cm

Door thickness: 20 cm

Protection level: 3 bar

Weight without concrete: 140 kg



### Installation requirements:

PD-covers generally open towards the inside (outside in special cases)

All doors should have a 4 cm free space both above the floor and under the ceiling

The doors and covers with their frames and anchors are to be placed in the forms in such a way that they are securely in place. Cast wall first. Only when the wall concrete has sufficiently set may the door leaf be filled with concrete and it is important that the door and cover leaves are closed and underpinned during the pouring of concrete. The distal pieces fixed to the locking device near the rubber seal guarantee the proper closing function.

Further details are given in the technical directives for installation, which are included with each delivery.

Modifications reserved